SEMKO, B.P., inzh.; YAKIMENKO, A.V.

Relation between coefficients of friction in slipping and coefficients of adhesion of the wheels of a mine loader. Vop.rud. transp. no.4:408-415 '60. (MIRA 14:3)

1. Institut gornogo dela AN USSR.
(Ore handling—Equipment and supplies) (Friction)

SEMKO, B.P., inzh.

Research on the acceleration and determination of the pull of the running gear of a rock-loading machine with an electric drive. Vop.rud. transp. no.4:416-423 '60. (MIRA 14:3)

1. Institut gornogo dela AN USSR.
(Ore handling—Equipment and supplies)
(Electric motors, Induction)

SEMKO, B.P.

Kinematics and dynamics of the process of the rock-loader bucket dipping into the stock pipe of rock. Sbir. prats' Inst. hir. spravy AN URSR no.6:112-121 '60. (MIRA 13:9)
(Mining machinery)

SEMKO, B. P., Cand Tech Sci -- "Study of the kinematics and dynamics of the process of thrusting the loading-machine's ~~shovel~~ into ~~the stock pile~~ a pile of rock." Stalino, 1961. (Min of Higher and Sec Spec Ed RSFSR. Novocherkassk Order of Labor Red Banner Polytech Inst im Sergo Ordzhonikidze) (KL, 8-61, 249)

SEMKO, B.P., inzh.

Empirical formula for calculating the penetration depth of a bucket loader into a rock dump. Sbor. trud. Inst. gor. dela AN URSR no.12:163-171 '61. (MIRA 15:11)

(Mining machinery)

ACC NR: AP7001488 SOURCE CODE: UR/0436/66/000/006/0017/0020

AUTHOR: Solomko, V. P.; Semko, L. S. (Candidate of chemical sciences)

ORG: Kiev State University (Kiyevskiy gosuniversitet)

TITLE: The effect of fiberglass on mechanical characteristics of polystyrene and polymethylmethacrylate in the vitreous state

SOURCE: Khimicheskaya promyshlennost' Ukrainy, no. 6, 1966, 17-20

TOPIC TAGS: reinforced plastic, polymethylmethacrylate, polystyrene, glass fiber, plastic film, plastic strength

ABSTRACT: Variations of tensile strength have been studied within the temperature range of the existence of the vitreous state in fiberglass-reinforced polystyene (PS) and polymethylmethacrylate (PMMA) films with variable fiberglass content. The procedures of preparation and testing of the films were described by the authors in an earlier study [Khimicheskaya promyshlennost' Ukrainy, no. 5, 1966]. Inversion of the strengthening effect of fiberglass was observed within the existence range of the glassy state only above the brittle point of the plastic material. This inversion was reflected in the existence of the maximum effect at a certain fiberglass content and at a temperature above the brittle point and was explained by the existence of a critical elasticity of macromolecules. The strengthening effect of the fiberglass was shown to occur even in the brittle state above a certain fiberglass content.

Card 1/2 UDC: 678.7.004.12:677.521

SEMKO, M. F. (Co-author)

See: ROZENFEL'D, L. Ya.

Semko, M. F. and Rozenfel'd, L. Ya. - "Working EZh-1 steel by the speed milling method," Nauch. zapiski Khar'k. mekhan.-mashinostroit. in-ta, Vol. IX, Issue 1, 1948, p. 89-98

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

SEMKO, M.F., professor; ANDREYEV, G.Ya., kandidat tekhnicheskikh nauk, nauchnyy redaktor; DONSKOY, Ya.Ye., redaktor; SHEVCHENKO, M.G., tekhnicheskiy redaktor

[Metal cutting with mineral-ceramic cutting tools] Rezanie metallov mineralokeramicheskim instrumentom. [Khar'kov] Khar'kovskoe obl. izd-vo, 1956. 90 p. (MLRA 10:1)
(Metal cutting)

VOROB'YEV, S.A., kand.tekhn.nauk, otv.red.; KONOVALOV, A.I., inzh., red.; MAKARENKO, V.P., inzh., red.; MIKHEYEV, M.Y., inzh., red.; NOVIKOVA, N.T., inzh., red.; PIKHTOVNIKOV, R.V., prof., red.; PODLOZHENOV, P.M., inzh., red.; SEMKO, M.F., prof., red.; TOROPOV, A.I., inzh., red.; TSERKOVNYY, I.M., inzh., red.; CHERKASHIN, I.P., inzh., red.; SHEVCHENKO, M.G., tekhn.red.; LIMANOVA, M.I., tekhn.red.

[Mechanization and automation of production processes; proceedings of the city technical conference] Mekhanizatsiia i avtomatizatsiia proizvodstvennykh protsessov; sbornik materialov gorodskoi tekhnicheskoi konferentsii. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1959. 295 p. (MIRA 13:1)

1. Kommunisticheskaya partiya Ukrainy. Khar'kovskiy gorodskoy komitet. 2. Nachal'nik Ukrainskoy proyektno-konstruktorskoy kontory "Prommekhanizatsiya" (for TSerkovnyy).
(Automation) (Technological innovations)

SOV/126-7-1-6/28

AUTHORS: ~~Semko, M. F.~~ and Palatnik, L. S.

TITLE: The Sensitivity of the TEMF of the "Natural Thermocouple" to Structural Changes in High Speed Steel (O chuvstvitel'nosti TEDS "Yestestvennoy Termopary" k strukturnym izmeneniyam v bystrorezhushchey stali)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1959, Vol 6, Nr 1, pp 48-52 (USSR)

ABSTRACT: The method of the "natural thermocouple" has found wide application for the determination of the temperature of the working parts of instruments during cutting of metals. It is based on the fact that the temperature is determined according to the thermoelectromotive force (thermo-e.m.f.) forming in the thermocouple, the elements of which are the cutter and the article. The point of contact between the cutter and article is taken as the hot junction of the thermocouple. The aim of the present work was to investigate the relationship between the thermo-e.m.f. of the "natural thermocouple" and the heat treatment of high-speed steel R18, as well as the influence of the duration of holding at

Card 1/5 temperatures of 500-600°C on the stability of the thermo-

e.m.f. of normally treated steel R18. For the measurement of the thermo-e.m.f. an apparatus was used which is shown in Fig.1. The thermo-e.m.f. of "natural thermocouples" formed by steel R18 after appropriate heat treatment, and that of three metals (copper, perlitic cast-iron and steel ST5) was measured. The lower ends of the specimens, except for a few small contact points, were covered by an insulating layer of asbestos and placed in a crucible filled with Wood's metal or tin. The molten metal heats the ends of the specimens up to the required temperature and established electrical contact between the non-insulated parts of the specimens. The temperature of the hot junction of the thermocouple thus formed is controlled by a thermocouple immersed in the crucible with the specimens. The contacts of the specimens with copper connecting wires across mercury which was put in the cylindrical grooves of the specimens served as cold junctions. Chills were placed on the upper ends of the specimens through which cold water was circulated. The thermo-e.m.f. was measured by a compensation method. The determination of the thermal capacity of specimens of steel R18 was carried out by the Gruzin method (Ref.1).

The Sensitivity of the TEMF of the "Natural Thermocouple" for Structural Changes in High Speed Steel

The investigated steel R18 had the following chemical composition: 0.75% C, 18.3% W, 4.57% Cr, 1.55% V, 0.3% Mo. Heat treatment was carried out in various ways as shown in the table on p.49. In Fig.2 the TEMF of specimens of steel R18 in relation to steel ST5 is shown:- (1) as annealed, (2) as quenched, (3) as quenched and tempered three times, (4) as quenched and tempered three times after the tenth soaking at 550°C. Fig.3 shows the TEMF of specimens of steel R18 in relation to copper (the details are as in Fig.2). Fig.4 shows the TEMF at 200, 300, 400 and 450°C of normally heat treated specimens of steel R18 after various numbers of isothermal soakings at 550°C (in relation to copper). The following conclusions are arrived at: 1. In the temperature range 20-800°C the thermo-e.m.f. of the "natural thermocouple" of the steel R18 changes continuously and smoothly with variation in preliminary heat treatment. At approximately 550°C the curves of the thermo-e.m.f. of the "natural thermocouples" "Steel R18-

 St5" and "Steel R18-Cast-iron" experience a considerable

The Sensitivity of the TEMF of the "Natural Thermocouple" for Structural Changes in High Speed Steel

decline in the increase of the thermo-e.m.f. with temperature, and the curve for the thermo-e.m.f. of the thermocouple "Steel R18-Copper" has a maximum at approximately 500-550°C. 2. Up to 500°C thermo-e.m.f. of quenched steel is less than that of annealed steel. After tempering steel which had been quenched from 1280°C, the thermo-e.m.f. increases. Repeated tempering at 560°C has no noticeable influence on the thermo-e.m.f. The thermo-e.m.f. and hardness of normally heat treated steel R18 remain stable on heating to a temperature not exceeding 580°C. Heating to 600°C, whilst not influencing the thermo-e.m.f., lowers the hardness (to 52 H_R). After "defective" and normal heat treatment (quenching from 1100°C, tempering at 180°C; and quenching from 1280°C, tempering at 560°C, respectively) the thermo-e.m.f. and hardness have practically the same values. Thus the control of the quality of heat treatment of cutters by the thermo-e.m.f. method is in general not effective, but can be used in particular cases, e.g. for detecting whether cutters have been tempered after quenching.

Card 4/5

The Sensitivity of the TEMF of the "Natural Thermocouple" for Structural Changes in High Speed Steel

3. Structural changes occurring in the zone undergoing wear of cutters made from steel R18 do not basically influence the thermo-e.m.f. at temperatures of up to 800°C. As the temperature is raised to 500°C the thermal capacity of normally treated high speed steel R18 remains practically unaltered and hence cannot cause any noticeable changes in the readings of the "natural thermocouple".
4. As a result of the investigations carried out it can be said that the "natural thermocouple" method is experimentally sound. However, above approximately 550°C the sensitivity of this method drops noticeably.
There are 4 figures, 1 table and 2 Soviet references.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnic Institute)

SUBMITTED: May 6, 1957

SEMKO, M.F.; BONDAR', V.I.

Investigating the averaging of the thermoelectromotive force of natural thermocouples. Trudy KhPI, Ser.mash. 19 no.5:19-29 '59. (MIRA 14:9)

(Thermocouples)

SEMKO, M F.

PHASE I BOOK EXPLOITATION SOV/5452

Donskoy, Yu. Ye., G.I. Karlash, and I.P. Lylyuk, eds.

Mekhanizatsiya i avtomatizatsiya; sbornik statey ob opyte vnedreniya mekhanizatsii i avtomatizatsii na Khar'kovskikh mashinostroitel'nykh zavodakh (Mechanization and Automation; Collection of Articles on the Introduction of Mechanization and Automation in Khar'kov Machinery-Manufacturing Plants) [Khar'kov] Khar'kovskoye knizhnoye izd-vo, 1960. 373 p. 3,900 copies printed.

Editorial Board: S.A. Vorob'yev, Candidate of Technical Sciences; Chairman of the Editorial Board; P.I. Zmeu, Engineer; A.A. Karlov, Engineer; V.I. Kuzakov, Engineer; A. Ye. Leonov, Docent, A.I. Tupitsyn, Candidate of Technical Sciences, and S.M. Khaimzon, Candidate of Technical Sciences; Ed.: M.I. Limanova. Ya. Ye. Donskoy, G.I. Karlash, and I.P. Lylyuk; Tech. Ed.: M.I. Limanova.

PURPOSE: This collection of articles is intended for technical and scientific personnel, outstanding workers, and shock workers of communist labor.

COVERAGE: The multifaceted experience of Khar'kov enterprises in the mechanization, automation, and improvement of manufacturing processes is generalized. The development of new machines, instruments, and production methods is considered and attention is given to newly established enterprises, and to the introduction of telemechanics in the Khar'kov gas-system management. By including concrete examples and facts, the authors of the Khar'kov industrial articles attempt to demonstrate the achievements of the June (1959) and July (1960) complex in fulfilling the resolutions of the Communist Party of the Soviet Union. Plenums of the Central Committee of the Communist Party of the Soviet Union. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Card 4/8

AVAILABLE: Library of Congress (TX1160.M595)

SEMKO, Mikhail Fedorovich; ATROSHCHENKO, Vasiliy Ivanovich; NESTERENKO, Yu.Yu., red.

[For the development of cooperation between the workers of science and production] Za razvitie sodruzhestva rabotnikov nauki i proizvodstva. Khar'kov, Izd-vo Khar'kovskogo gos. univ., 1961. 106 p. (MIRA 18:1)

S/123/62/000/016/011/013
A004/A101

AUTHORS: Bezzubenko, N. K., Semko, M. F.

TITLE: Reaming with mineral-ceramic reamers

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 16, 1962, 60, abstract 16B362 ("Tr. Khar'kovsk. politekhn. in-ta", 1951, v. 35, 157 - 170)

TEXT: A new method of fastening mineral-ceramic bits to the reamer body has been developed, viz. gluing with epoxy-base resin glues. The gluing method ensures a high strength of joint and makes it possible to work out a simple and convenient tool design. A brief description is given of a 4-tooth reamer with glued-on ЦМ-332 (TsM-332) bits. These reamers were tested on the 1K62 universal lathe in machining Ст45 (St45) grade steel parts of 35 mm length, 120 mm O.D., diameter to be machined - 43 mm, v = 108 m/min, s = 0.43 mm/rev and t = 0.2 mm, and 18 - 36 cast-iron parts of 180 - 196 HB hardness, 100 mm long, 95 mm O.D., diameter to be machined 50 mm, v = 200 m/min, s = 0.6 mm/rev, t = 0.2 mm in the first pass and v = 250 m/min, s = 0.6 mm/rev and t = 0.07 mm in the second pass. The blanks being machined were clamped in the chuck, the reamer in the tail stock spindle. The tests showed that in machining steel and cast iron with mineral-ceram-

Card 1/2

S/123/62/000/016/011/013
A004/A101

Reaming with mineral-ceramic reamers

ic reamers the wear shows most pronounced on the reamer cutting blade. In machining cast iron, scratches are appearing across the calibrating blade which have a pitch equal to the feed, these scratches being transformed to notches (grooves) in the course of the operation. The surface finish of steel parts is superior to that of cast-iron parts. The authors present data on the machining quality and sharpening of the reamers. There is 1 reference.

E. Dymova

[Abstracter's note: Complete translation]

Card 2/2

S/0276/64/000/002/B173/B173

ACCESSION NR: AR4027702

SOURCE: RZh. Tekhnologiya mashinostroyeniya, Abs. 2B1036

AUTHOR: Bezzubenko, N. K.; Semko, M. F.

TITLE: Choice of the geometric parameters of mineraloceramic reamers

CITED SOURCE: Tr. Khar'kovsk. politekhn. in-ta, v. 46, no. 8, 1963, 127-134

TOPIC TAGS: mineral ceramic reamer, cutting edge, annular groove, optimum angle, band wear, band width calibration, micro-chipping, radial force

TRANSLATION: Experiments in determining the optimum geometric parameters of mineral-ceramic reamers were made on a lathe. The plan approach angle φ was determined by testing the heardness of the cutting edge in machining parts with inside annular grooves. In reamers with phi = 45° failure of the top occurred after 2,000 bites in those with phi = 30° after 3,000; the least wear of the calibrating band was shown by reamers with phi = 20° (in milling grooveless bushings); this angle size is recommended as optimum. It was found that the back rake angle gamma, equal to 0°, is optimum for mineral — ceramic reamers.

1/2

Card

ACCESSION NR: AR4027702

The relief angle in the plane normal to the main cutting edge $alpha_3$ was determined by the resistance of the reamers, the highest being shown by those with $alpha_3$ 8--10°. The graph of the dependence of the wear on the band upon the back angle of the tooth in radial cross-section shows that the optimum value of the relief angle of calibrating part $alpha_k$ is 6°. Narrow calibrating bands lower the resistance of the tooth and increase the wear as a result of microchipping; a broad band results in more intensive wear due to growth in the radial forces of elastic deformation and the friction forces. The optimum width was found to be 0.5--0.6 mm. Four illustrations, bibliography of 5 titles. S. Pinchuk.

DATE ACQ: 24Mar64 SUB CODE: ML ENCL: 00

Card 2/2

SEMKO, M.F., prof.; BASKAKOV, I.G., kand. tekhn. nauk; DROZHZHIN, V.I., inzh.; KACHER, V.A., kand. tekhn. nauk; RUDNEV, A.V. kand. tekhn. nauk, retsenzent; KUNIN, P.A., inzh., red.

[Mechanical processing of plastics; cutting] Mekhanicheskaia obrabotka plastmass; frezerovanie. Moskva, Mashinostroenie, 1965. 131 p. (MIRA 18:4)

SEMKO, M.F., prof.; BASKAKOV, I.G., kand. tekhn. nauk; DROZHZHIN, V.I., inzh.; KACHER, V.A., kand. tekhn. nauk; RUDNEV, A.V., kand. tekhn. nauk, retsenzent; KUNIN, P.A., inzh., red.

[Machining plastics; milling] Mekhanicheskaia obrabotka plastmass; frezerovanie. Moskva, Mashinostroenie, 1965. 131 p. (MIRA 18:3)

SEMKO, M.F., kand. tekhn. nauk; GRABCHENKO, A.I., inzh.; UMUNYAN, M.D., inzh.

Effect of the binder on the performance of diamond wheels.
Mashinostroenie no.5:24-26 S-O '65. (MIRA 18:9)

L 06334-67 EWP(k)/EWT(m)/EWP(t)/ETI IJP(c) DJ/JD

ACC NR: AR6013843 (A,N) SOURCE CODE: UR/0276/65/000/011/B102/B102

AUTHORS: Semko, M. F.; Baskakov, I. G.

TITLE: Calculation of thermal deformation in solid and hollow cylindrical parts during machining

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 11B705

REF SOURCE: Vestn. Khar'kovsk. politekhn. in-ta, no. 1(49), 1965, 6-13

TOPIC TAGS: metal cutting, metal machining, thermal deformation

ABSTRACT: Experiments and calculations have shown that, during machining of specimens with straight cut-off tools, the principal factor affecting the magnitude of the overall temperature error is the temperature error due to the elongation of the cutting tool. For accurate work the cutting tool length should be minimized. With increased cutting speed and feed rate the temperature of the part decreases; however, the total accompanying thermal deformation is much greater than the decreased thermal deformation of the part. 4 illustrations. Bibliography of 3 titles. L. Tikhonova [Translation of abstract]

SUB CODE: 13

UDC: 621.941.01

Card 1/1

SEMKO, P.

Agriculture - Ukraine

Progress of agriculture along the South-Ukraine Canal. Kolkh. proizv 12, No.3, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

SEMKO, P.

Ukraine - Irrigation Farming

Prospects for developing collective farm production in the area of the South Ukrianian Irrigation Canal. Sots.sel'khoz. 24, No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

SEMKO, R.S.

Effect of predaceous fishes on the amount of young of the salmon family. Trudy probl.i tem.sov. no.6:150 '56. (MLRA 9:10)

1. Kamchatskoye otdeleniye Tikhookeanskogo instituta rybnogo khozyaystva i okeanografii.
(Bol'shaya River--Salmon) (Trout)

SEMKO, R.S.

New data on the western Kamchatka salmon [with English summary in insert] Zool.zhur.35 no.7:1017-1022 Jl '56. (MLRA 9:9)

1.Kamchatskoye otdeleniye Tikhookeanskogo instituta rybnogo khozyaystva.
(Kamchatka--Salmon)

YEGOROVA, T.V.; KROGIUS, F.V.; KURENKOV, I.I.; SEMKO, R.S.

Causes of variations in the abundance of sockeye salmon in the Ozernaya River. Vop. ikht. 1 no.3:439-447 '61. (MIRA 14:11)

1. Kamchatskoye otdeleniye Tikhookeanskogo nauchno-issledovatel'skogo instituta rybnogo khozyaystva i okeanografii - TINRO.
(Ozernaya River (Kamchatka)--Salmon)

SEMKO, R.S.

Recent changes in the abundance of Pacific salmons and their principal causes. Trudy sov. Ikht. kom. no.13:117-129 '61.
(MIRA 14:8)

1. Kamchatskoye otdeleniye Tikhookeanskogo nauchno-issledovatel'skogo instituta rybnogo khozyaystva i okeanografii.
(Pacific Ocean—Salmon fisheries)

PAVLOVSKIY, Ye.N., akademik, glav. red.; MOISEYEV, P.A., otv. red.; SMIRNOV, A.I., zam. otv. red.; BIRMAN, I.B., red.; KAGANOVSKIY, A.G., red.; KROGIUS, F.V., red.; KROKHIN, Ye.M., red.; KURENKOV, I.I., red; LAGUNOV, I.I., red.; PANIN, K.I., red.; SEMKO, R.S., red.; PANIN, N.V., red.

[Salmon fisheries of the Far East; materials] Lososevoe khozyaistvo Dal'nego Vostoka; materialy. Moskva, Nauka, 1964. 201 p. (MIRA 17:9)

1. Soveshchaniye po voprosam lososevogo khozyaystva Dal'nego Vostoka. 3d, Petropavlovsk-Kamchatskiy, 1960. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii (for Moiseyev). 3. Kamchatskoye otdeleniye Tikhookeanskogo nauchno-issledovatel'skogo instituta rybnogo khozyaystva i okeanografii (for Semko, Birman, Krokhin, Kurenkov). 4. Kafedra ikhtiologii Moskovskogo universiteta imeni M.V.Lomonosova (for Smirnov).

L 50211-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WW/GS/RM

ACCESSION NR: AT5002656 S/0000/64/000/000/0024/0030 34 33 B+1

AUTHOR: Shrubovich, V.A.; Chernyavskiy, G.V.; Semko, Ye.P.; Kornev, K.A.

TITLE: Polymerization and copolymerization of 1,2-dialin

SOURCE: AN UkrSSR. Institut khimii vysokomolekulyarnykh soyedineniy. Sintez i fiziko-khimiya polimerov; sbornik statey po rezul'tatam nauchno-issledovatel'skikh rabot (Synthesis and physical chemistry of polymers; collection of articles on the results of scientific research work). Kiev, Naukova dumka, 1964, 24-30

TOPIC TAGS: dialin polymerization, dialin copolymerization, isoprene copolymer, styrene copolymer, methyl methacrylate, sodium naphthalene catalyst

ABSTRACT: The authors polymerized 1,2- and 1,4-dihydronaphthalenes in tetrahydrofuran at -80, 0 and +40C with varying amounts of sodium naphthalene catalyst and attempted to copolymerize these dialins with styrene (-80C, 48 hrs.), isoprene (-65C, 48 hrs.) and methylmethacrylate (standard conditions) in an attempt to obtain materials with improved heat resistance and solubility in standard solvents. It was found that anionic polymerization of 1,2-dialin is possible in the presence of sodium naphthalene, while the 1,4-isomer does not yield a polymer under these conditions. The former

Card 1/2

L 50211-65
ACCESSION NR: AT5002656

copolymerized with styrene and isoprene, but not with methylmethacrylate. A brief description is given of the experimental procedure, polymer composition and properties. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: Institut khimii vysokomolekulyarnykh soyedineniy AN UkrSSR (Institute of the Chemistry of High Polymers, AN UkrSSR)

SUBMITTED: 22Jun64 ENCL: 00 SUB CODE: OC

NO REF SOV: 002 OTHER: 011

Card 2/2

26033
S/105/61/000/008/001/004
E194/E155

9,3240

AUTHORS: Kharchenko, R.R., Professor, and
Semko, Yu.I., Engineer. (Moscow)

TITLE: Measuring amplifiers for centralised automatic control systems

PERIODICAL: Elektrichestvo, 1961, No.8, pp. 7-13

TEXT: The object of this article is to provide a general review of d.c. amplifiers operating under impulse conditions with input signals ranging from a few millivolts to some tens of millivolts and with output signals of 1 - 10 V. The type of amplifiers considered are those which accurately reproduce the signal; mis-match or zero-type amplifiers are excluded. Only electronic amplifiers are considered because magnetic amplifiers are not sufficiently accurate and galvanometer amplifiers not sufficiently fast. Amplifier errors are subdivided into two classes. The first class includes errors due to stray noise and zero drift; these errors are denoted by γ, which is the ratio of the stray signal to the rated output signal. It is shown that such errors depend not only on the magnitude of γ but also on the point of the

Card 1/8

Measuring amplifiers for centralised...

amplifier scale considered. The second class of errors is associated with instability of the amplification factor and non-linearity of the amplitude characteristic. The error is denoted by λ which is the ratio of the variation in the amplification factor at an arbitrary point on the scale to the rated output. In a linear amplifier the amplitude depends only on the value of λ and not on the magnitude of the amplified signal (or point on the scale). This is also approximately true for a non-linear amplifier. If both sources are to give the same error at a given point on the scale the error γ must be much less than the error λ. Accordingly it is of primary importance to reduce zero drift and noise. Consideration is then given to those stages in the structural circuit of the amplifier which mainly govern the value of γ and λ, and it is shown that in a three-stage amplifier with negative feedback the value of λ does not depend on the coupling between the stages, whereas the value of γ does. In practice, in simple three-stage amplifiers γ depends mainly on the first stage. The simple circuit of Fig.1 is then considered; here β denotes the feedback transmission factor. A numerical example shows that in this case the requirements in respect of zero drift and noise

Measuring amplifiers for centralised...

are very severe. Amplifiers with schematic diagrams similar to Fig.1 normally have three stages; a modulator, an a.c. amplifier and a demodulator. The modulators may be of various types but only vibrator modulators have sufficiently low stray noise. Consequently only such mechanical modulators can be used in highly accurate amplifiers for small signals using the circuit of Fig.1. However, the speed of operation of such an amplifier is quite inadequate. Accordingly more complicated d.c. amplifiers have been developed. They may be classified into two groups: the first employs a combined system for transmitting the amplified signal (such as two parallel channels, one low-frequency and one high, with common feedback) with no device for zero drift correction. The second group includes amplifiers in which the signal passes through one wide-band d.c. amplifier with a device for zero drift correction. The article proceeds to consider six schematic diagrams of special amplifiers of which the first two are of the first class just mentioned and the remainder of the second. The first schematic diagram considered is that of Fig.2, in which the notation is as follows: $Y_{\sim}$ - a.c. amplifier; YHC - direct-coupled d.c. amplifier;

Card 3/ 8

Measuring amplifiers for centralised....

Σ - summator at input of direct-coupled d.c. amplifier; МДМ- d.c. amplifier with modulator at input and demodulator at output; ООС - negative feedback link; Ф - filter. Amplifiers of this circuit based on transistors have been described in the literature. The second schematic diagram considered differs from the first only in the absence of the a.c. amplifier. Both types may be equal in respect of noise level; several variants have been constructed. The schematic diagram of the next amplifier considered is shown in Fig.4 where the notation is as hitherto with the addition that: ВП is a vibrator converter; ДБ is a motor; and P is a reduction gear. In this amplifier the zero drift of the wide-band d.c. amplifier is periodically corrected. The correcting device consists of a follow-up system which automatically reduces the zero drift voltage to the threshold of sensitivity of the amplifier. A disadvantage is that there are periodic interruptions in the operation of the main amplifier. The next circuit considered is a development of the previous one; the use of a motor is avoided, thus improving the dynamics of the system and reducing its size. In this case a capacitor is connected across the feed-back circuit.

However, the accuracy of zero drift correction is limited by the presence of zero drift in the feed-back circuit itself. In amplifiers of this type it is important correctly to select the time interval between two successive corrections, which depends on the nature of the zero drift of the d.c. amplifier. The next circuit considered is that of Fig.6, in which the notation is as before with the addition that Д is a voltage divider. In this type of amplifier the zero drift of the d.c. amplifier is continuously corrected by means of a static follow-up system. An essential condition for normal operation of an amplifier of this type is that the amplification factor of the d.c. amplifier should be in exact agreement with the value of the reciprocal of the dividing factor of the voltage divider. Since the voltage divider ratio is constant, any change in the amplification factor of the d.c. amplifier introduces some zero error; the d.c. amplifier must therefore have a stable amplification factor. The final type of circuit considered is that of Fig.7 in which zero drift is continuously corrected by an astatic follow-up system. The mismatch signal is applied to the input which consists of a vibratory converter, a phase-sensitive a.c. amplifier, a reversing

Measuring amplifiers for centralised....

motor and a reduction gear. These are all standard components of an automatic electronic potentiometer. If the zero drift exceeds the threshold of sensitivity of the device, the follow-up system automatically balances the d.c. amplifier and annuls the zero drift. As zero drift is quite slow the follow-up system can easily correct it. In general, this system is better than the previous one. Its bandwidth depends on the natural frequency characteristic of the d.c. amplifier. Investigations have shown that amplifiers of this type are promising. In an experimental model the remanent zero drift did not exceed some tens of microvolts during four hours, and instability of the d.c. amplification factor was of the order of 0.2%. There are 7 figures and 34 references: 26 Soviet and 8 non-Soviet. The four most recent English language references read as follows:

Ref.22: T.J. Marcus. "Highly sensitive electronic chopper". Electronics, 1959, V.32, No.40.

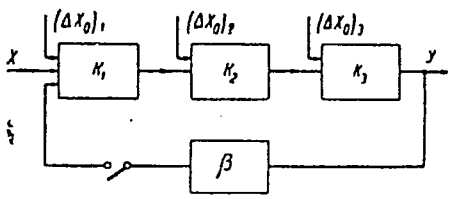
Ref.28: B. Shackl and M. Beaney. "A zero correcting for use with d.c. amplifiers". Electronic Eng., 1957, V.29, No. 352.

Ref.32: J. Cederbaum, P. Balaban. "Automatic drift compensation in d.c. amplifiers". Rev.Sc.Instr., 1955, No. 8.

Measuring amplifiers for centralised.... S/105/61/000/008/001/004. E194/E155

Ref.26: F.R. Bradley, R.M. Coy. Electronics, 1952, No.5.

SUBMITTED: March 8, 1961



Card 7/ 8 Fig. 1

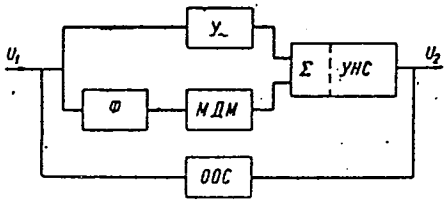


Fig. 2

SEMKO, Yu.I.; SOLODOV, Yu.S.; LEVIN, M.I.

Analog to digital function converter for a.c.transducers for scanning control systems. Izm.tekh. no.11:35-39 N '61.
(MIRA 14:11)
(Electronic calculating machines)

KONCHALOVSKIY, V.Yu.; MALINOVSKIY, V.N.; SEMENOV, V.F.; SEMKO, Yu.I.

Parameters of switching transistors. Izm.tekh. no.12:41-43 D '62. (MIRA 15:12)

(Transistors)

L 53827-65 EWT(d)/EWT(l)/EEC(m)/EEC(f)/EWP(v)/EEC-4/EWP(k)/EWP(h)/EWA(h)/EWP(l)
ACCESSION NR: AP5009875 Pq-4/Pf-4/ UR/0115/65/000/002/0044/0046
Peb/Pg-4 621.374

AUTHOR: Levin, M. I.; Semko, Yu. I.; Solodov, Yu. S.; Mikhaylov, Ye. V. 36 B

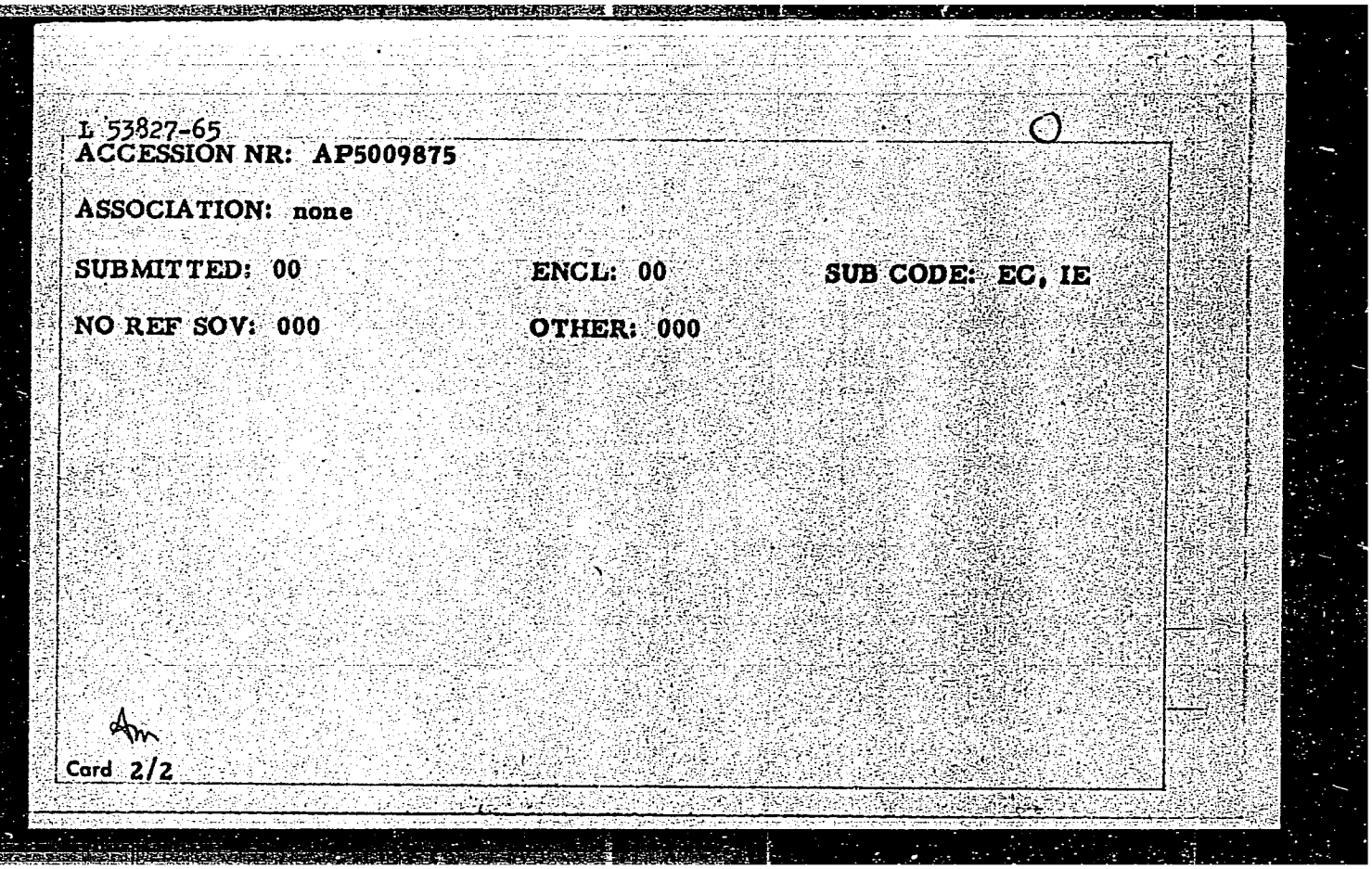
TITLE: Encoding the output signals of pulse-supplied M-var sensors 10

SOURCE: Izmeritel'naya tekhnika, no. 2, 1965, 44-46

TOPIC TAGS: mutual inductance sensor, industrial process control 25 14

ABSTRACT: As the measurement process with a variable-mutual-inductance (M-var) sensor of a differential-transformer or ferrodynamic type supplied by commercial 50 cps has been slow, the authors suggest supplying the sensor with 4-msec sawtooth pulses. An experimental model had a measurement time of 2 msec, an output range of 0—0.5 v, and a basic error of ±0.5%; varying the pulse tilt angle by ±10% resulted in an additional error of ±0.8%. Variation of the supply voltage of an analog-digital-converter by ±20% did not introduce a noticeable error. Only a block diagram is given. Orig. art. has: 5 figures and 10 formulas.

Card 1/2



L 53827-65
ACCESSION NR: AP5009875

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EC, IE

NO REF SOV: 000 OTHER: 000

Card 2/2

L 00008-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACCESSION NR: AR5008446 UR/0271/65/000/002/A035/A035

621.398.694

43
B

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika. Svodnyy tom, Abs. 2A208

AUTHOR: Levin, M. I.; Semko, Yu. I.; Semenov, V. F.; Solodov, Yu. S.; Yevtikhiyev, N. N.; Mozheyko, A. A.

TITLE: Measuring units of the "Tsentrotekhnika"system

CITED SOURCE: Tr. Mosk. energ. in-ta, vyp. 52, 1963, 133-146

TOPIC TAGS: supervisory control system / Tsentrotekhnika system

TRANSLATION: Measuring units are described of the "Tsentrotekhnika" supervisory control system. The system is designed for operation with several types of thermocouple sensors, resistance thermometers, and differential-transformer sensors. For each type, special measuring units have been developed which connect the sensor output with the nonelectric measurands and convert them into a binary digital code. Each measuring unit is constructed as a separate adapter which includes all measuring elements. By means of a special plug-and-socket

Card 1/2

L 00008-66
ACCESSION NR: AR5008446

device, the adapters are connected to the system circuit. All measuring units convert the deviation of the measurand from its normal value into a digital code. The measured difference between the present and the normal values is converted into the code by means of a developing discrete transformation. Special individual settings are used to obtain signals corresponding to normal values. Figs. 8. Bibl. 4.

SUB CODE: IE ENCL: 00

Card 2/2

L 34038-66
ACC NR: AP6013010 SOURCE CODE: UR/0410/66/000/001/0033/0040

AUTHOR: Levin, M.I. (Moscow); Semko, Yu. I. (Moscow)

ORG: none

TITLE: The determination of the parameters of periodic signals from the measurement of their instantaneous values

SOURCE: Avtometriya, no. 1, 1966, 33-40

TOPIC TAGS: signal analysis, electronic equipment, measuring instrument

ABSTRACT: The general properties of the method for the determination of periodic voltages and currents from the measurements of their instantaneous values have been studied. This approach makes it possible to determine amplitudes, phase shifts, and instantaneous and average values of the fundamental frequency as well as of the higher harmonics. The present article describes an analysis of the errors in the registration of the parameters in question. In the zero to several kilocycle band the error is from 0.1 — 0.5%. An interesting feature of this method is the increase in accuracy with the decrease in signal frequency. On the basis of the new method, the authors propose block diagrams for the possible design of fast digital devices and a.c. converters (automatic digital potentiometers, a.c. bridges, spectral analyzers, etc.). Orig. art. has: 11 formulas, 6 figures, and 1 table.

SUB CODE: 09, 14 / SUBM DATE: 18Sep65 / ORIG REF: 003 / OTH REF: 004

UDC: 621.317.312

Card 1/1

L 22773-66 EWT(d)/EWP(1) IJP(c) BB/GG SOURCE CODE: UR/0115/66/000/002/0038/0041

ACC NR: AP6010871

AUTHOR: Semko, Yu. I.

ORG: none

TITLE: Digital conversion of M, L, C, and R parameters using pulsed power supply

SOURCE: Izmeritel'naya tekhnika, no. 2, 1966, 38-41

TOPIC TAGS: analog digital converter, parametric converter

ABSTRACT: A method of digital conversion of M (mutual inductance) type output signals proposed earlier by M. I. Levin et al. has been expanded to include other parameters—L (inductance), C (capacitance), and R (resistance). In this method, pulses of a special shape are fed to the converters, and rectangular pulses with an amplitude proportional to the value of the parameters are generated at the output. Digital conversion of the amplitude is performed in a single pulse by means of a d-c analog-digital converter. To obtain rectangular voltage, emf, or current pulses at the output of the converters, pulses of the following shapes are fed: sawtooth current pulses $i_1(t) = K_1 t$, $0 \leq t \leq t_p$ for M and L type converters; sawtooth-voltage pulses $U_1(t) = K_u t$, $0 \leq t \leq t_p$ for C type converters; and rectangular current pulses $i_1(t) = a$, $0 \leq t \leq t_p$ for R type converters. The converters can

UDC: 621.374

Card 1/2

SEMKOV, Angel, prepodavatel'; CHOKOYEV, Zhivko, prepodavatel'; OSTAPENKO, N.N., red.; PASTUKHOV, V.M., red.; KOVAL'ZON, F.P., red.; DORODNOVA, L.A., tekhn.red.

[Training workers in machining metals in industrial schools] Podgotovka rabochikh po metalloobrabotke v promyshlennykh uchilishchakh. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 44 p. (MIRA 13:11)

1. Promyshlennoye uchilishche po metalloobrabotke goroda Ruse Bolgarskoy Narodnoy Respubliki (for Semkov, Chokoyev).
(Machine shop practice--Study and teaching)

SEMKOV, B.F.

AUTHOR: Semkov, B. F. 30-1-9/39

TITLE: Small-Size Computers (Malogabaritnyye vychislitel'nyye mashiny)

PERIODICAL: Vestnik AN SSSR, 1958, Vol. 28, Nr 1, pp. 60-64 (USSR)

ABSTRACT: In the laboratory for machines and systems of control of the AN USSR the small-size computers M-2 and M-3 were developed under the supervision of Corresponding Member AN I. S. Bruk. The machine M-2 fills a surface of 22 m^2 and has 1600 electron tubes and 10 000 diodes. The machine M-3 has 770 electron tubes and about 4000 diodes. With respect to working velocity (2000 operations per second) and accuracy (up to 10 decimals is by no means inferior to the large computer "Strela". The first M-2 machine has already been in operation for more than 3 years (see illustration), and numerous problems belonging to various fields have already been solved by it . The computer M-3 was built in 1956 by the scientific research institute of the electric industry (see illustration). It is not quite as efficient as the M-2. The M-3 computer is operated by 1 man only per shift, and can work with interruptions,

Card 1/2

whereas other machines take a considerable time after being switched off before being fit for operation. The M-3 has been working for 1 year and numerous important problems have been solved with it. As practice has shown that it can be used for work in various fields, it is intended to produce this machine in series within short. In order to increase the speed of development of computation technique, it is planned to have elements of computer produced in series by industrial plants. There are 2 figures.

AVAILABLE: Library of Congress

1. Electron computers-Application

SOV/30-58-8-10/43

AUTHORS: Blagonravov, A. A., Member, Academy of Sciences, USSR, Semkov, B. F.

TITLE: The Science and the Tasks of Automation of Manufacturing Processes (Nauka i zadachi avtomatizatsii proizvodstvennykh protsessov)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, 28 Nr 8, pp. 69-77 (USSR)

ABSTRACT: The change to full automation requires a knowledge of the laws of the manufacturing process, of a perfection of technology. It is connected with the introduction of new equipment, of new methods and technical means of automation. These problems can best be solved by the combined efforts of scientists, technologists, engineers and experts for automation. The establishment of fully automatized experimental model stations is the shortest way to this aim. Experience gathered from them can serve for other enterprises. Many scientific institutions of the Academy are linked up with this work. The achievements in the field of physics and chemistry play an important role in the introduction of automation. The chemical

Card 1/4

and the petroleum industry can best be adapted to full automation as they have continuous working processes. Such a plan of automation of ammonia production is carried out at present in the Lisichansk Combine which elaborated it together with the Gosudarstvennyy institut azotnoy promyshlennosti (State Institute for Nitrogen Industry) and a number of other scientific research- and planning organizations. Full automation is also introduced in the petroleum refinery at Moscow. The Institut metallurgii (Institute for Metallurgy) in association with the Institut avtomatiki i telemekhaniki (Institute of Automatics and Telemechanics) and the Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute for Ferrous Metallurgy) are planning fully automatized metallurgical experimental production plants. The coal industry also offers possibilities for automation. In the field of machine construction many problems still remain to be solved. At present advances are made in the elaboration of preset course controls for machines and machine trains. The economic efficiency is the most interesting factor of automation. The Institut ekonomii Akademii

The Science and the Tasks of Automation of Manufacturing Processes

nauk SSSR (Institute of Economics, AS USSR) as well as branch institutes and universities are asked to join in the study of the use of computers for planning and statistics. The development and introduction of new apparatus advances only very slowly. Many working procedures need automatic control with regard to the use of atomic energy in chemical and other industries. Therefore the development of the cybernetics is of great importance. For this purpose the Presidential Committee, AS, USSR, has asked the following scientific institutions to join in this effort:
The Matematicheskiy institut (Institute of Mathematics), the Institute of Automatics and Telemechanics, the Laboratoriya upravlyayushchikh mashin i sistem (Laboratory for Control Machines and Systems), the Leningrad Branch of the Institute of Mathematics, the Institute of Economy, the Siberian Branch of the Academy, the Institut tochnoy mekhaniki i vychislitel'noy tekhniki (Institute of Precision Mechanics and Calculating Techniques), Institut yazykoznaniya (Institute of Linguistics), the Laboratoriya elektromodelirovaniya Vsesoyuznogo instituta nauchno-tekhnicheskoy informatsii (Labo-

The Science and the Tasks of Automation of Manufacturing Processes

ratory of Analog Computers of the All Union Institute of Scientific Information). The investigation of the biological problems of cybernetics will be carried out by the scientific institutions of the Otdeleniye biologicheskikh nauk (Department of Biological Sciences).

S/030/62/000/009/001/002
I046/I242

AUTHOR: Semkov, B.F.

TITLE: Philosophical problems of cybernetics

PERIODICAL: Akademiya nauk SSSR. Vestnik, no. 9, 1962, 128-132

TEXT: The theoretical cybernetics conference of the Academy of Sciences of the USSR was held in Moscow on July 1 and 2, 1962 with over 1000 participants. It dealt mainly with the application of cybernetics to animate nature and human psychics. A.A. Markov advanced a new definition of cybernetics, free of the concepts of "control" and "information," interpreting the subject as a general theory of causality networks. Each event is reduced to a system consisting of a finite number of "points," each of which can occupy a finite number of states. The various states are linked by causality relations, either "rigid" or "non-rigid" (probability-type) which act in time, this being a medium divided into discrete "cycles." The problem of control reduces to an appropriate organization of external stimuli with the purpose of obtaining the desirable reaction. A.A. Lyapunov, in a paper "Control systems of animate nature and general approach

Card 1/3

...that any sufficiently

complete model of a living creature is necessarily a living creature, and the model of an intelligent being is an intelligent being in itself. The discussion that followed proved that any final conclusions on this subject would be premature.

SEMKOV, B.F.

ACHARKAN, V.A.; BARSKOV, I.M.; BIRYUKOV, I.S.; BORODINA, L.Ya.; BRENNER, M.M.; GOHELIK, B.Ye.; GUMEROV, M.N.; ZORKAYA, N.M.; IOFFYSH, A.I.; KAYDALOVA, O.N.; KAPUSTIN, Ye.I.; LEBEDEVA, M.A.; LESHKOVTSEV, V.A.; LYSENKO, V.P.; MARKIN, A.B.; MIKHAYLOV, N.N.; NEST'YEV, I.V.; NECHAYEV, N.V.; NIKOL'SKIY, A.V.; OSTROUKHOV, M.Ya.; PISARZHEVSKIY, O.N.; POLUBOYARINOV, M.M.; POPOV, Yu.N.; PRASOLOV, M.A.; POKATAYEV, Yu.N.; RIMBERG, A.M.; RYABOV, V.S.; SEMKOV, B.F.; SPERANSKAYA, Ye.A.; TAKOYEV, K.F.; TRIFONOVA, G.K.; TROFIMOVA, V.I.; SHAKHNAZAROV, G.Kh.; SHKARENKOVA, G.P.; SHMERLING, K.G.; EYDEL'MAN, B.I.; MIKAELYAN, E.A., red.; MUKHIN, Yu.A., tekhn.red.

[U.S.S.R. as it is; a popular illustrated handbook] SSSR kak on est'; populiarnyi illiustrirovannyi spravochnik. Moskva, Gos.izd-vo polit. lit-ry, 1959. 462 p. (MIRA 12:2)

(Russia)

SEMKOV, B.F.

Philosophical problems of cybernetics. Vest. AN SSSR 32 no.9:128-131 S '62. (MIRA 15:9)

(Cybernetic

SEMKOV, Nikolai, inzh.; SHTIRKOV, Petur, inzh.; NESTOROVA, Penka, inzh.

Diagram and technological aspects of copper flotation in enriching lean copper ore from the "Medet" bed. Tekhnika Bulg 13 no.7:13-15, 33 '64.

BELOUSOV, A.S., inzhener; KON'SHIN, P.P., inzhener; KANTOR, S.Z.: SEMKOV, V.D.; SPORYSHKOV, P.N.: TURITSYN, V.V.; CHIZHIKOV, Yu.M. kandidat tekhnicheskikh nauk.

Improve the quality of hollow bore steel. Metallurg 2 no.2:21-28 F '57. (MLRA 10:4)

1. Zavod "Serp i molot" (for Belousov, Kon'shin).2. TSentral'naya zavodskaya laboratoriya (for Kantor). 3.Starshiy kalibrovshchik Zavoda im. Serova (for Semkov).4. Nachal'nik prokatnoy laboratorii (for Sporyshkov). 5. Rukovoditel' sortovoy gruppy TSentral'noy zavodskoy laboratorii Zavoda "Krasnyy Oktyabr'"(for Turitsyn). 6. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Chizhikov).
(Tool steel) (Boring machinery)

SEMKOV, V.D.

Efficiency in grooving 320 rolling mills rolls. Metallurg 10 no.2:24-26 F '65. (MIRA 18:3)

1. Starshiy kalibrovshchik metallurgicheskogo kombinata im. A.K. Serova.

SEMKOVSKAYA, K. V.

Orlov, P. M. and Semkovskaya, K. V. - "The application of the stereo-photographic method for the study of deformation of engineering structures," Doklady (Mosk. s. -kh. akad. im. Timiryazova), Issue 9, 1949, p. 157-58

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

SEMKOVSKIY, V.V., inzhener; SYREYEV, I.I., inzhener.

More attention should be given to the production of new machines for the complete mechanization of the construction industry. Mekh.stroi. 10 no.8: 3-6 Ag '53. (MLRA 6:8)

(Building machinery) (Machinery in industry)

SEMKOVSKIY, V.V.; SHAFRANSKIY, V.N.; KANTOROER, S.Ye., kandidat tekhnicheskikh nauk, redaktor; DAKHNOV, V.S., tekhnicheskiy redaktor.

[Complex mechanization of construction work and problems] Kompleksnaia mekhanizatsiia stroitel'nykh rabot i voprosy ee effektivnosti. Moskva, Gos.izd-vo lit-ry po stroitel'stvu i arkhitekture, 1956.174 p. (MIRA 9:4)
(Construction industry)

SEMKOVSKIY, V., inzhener.

Building machinery in England. Stroitel' 2 no.7:21-22 Jl '56.
(MLRA 10:1)

(London--Building machinery--Exhibitions)

SEMKOVSKIY, V.V., inzhener.

Building and road machinery. Mekh.stroi.13 no.11:26-30 N '56.
(Building machinery) (Road machinery) (MLRA 9:12)

SEMKOVSKIY, V.V., inzh.

Planning over -all mechanization of construction for 1958. Biul. stroi. tekh. 15 no.3:10-12 Mr '58. (MIRA 11:3)

1. Gosstroy SSSR.

(Building machinery)

SEMKOVSKIY, V.V.; SHAFRANSKIY, V.N.; KAZARINOV, V.M., inzh., red.; MORSKOY, K.L., red.izd-va; BOROVKOV, N.K., tekhn.red.

[Over-all mechanization in construction and its efficiency] Kompleksnaia mekhanizatsiia v stroitel'stve i ee effektivnost'. Izd.2., dop. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 215 p.

(MIRA 14:3)

(Building machinery)

SEMKOVSKIY, V.V., inzh.

Let's improve the utilization and repair of building machinery. Mekh. stroi. 18 no.11:22-23 N '61. (MIRA 16:7)

1. Zamestitel' nachal'nika otdela mekhanizatsii Gosudarstvennogo komiteta Soveta Ministrov SSSR po delam stroitel'stva.
(Construction equipment--Maintenance and repair)

SEMKOVSKIJ, V.V. [Semkovskiy, V.V.]; TUREK, Jiri, inz. [translator]

Some problems of the development of building trade mechanization. Inz stavby 11 no.2: Suppl: Mechanizace no.2:17-19 '63.

1. Statni vybor pro vystavbu pri Rade ministru SSSR, Moskva (for Semkovskij). 2. PSMAS, Praha (for Turek).

PRZESMYCKI, F.; PRAZMOWSKI, W.; SEMKOW, R.

Studies on herpes simplex virus. Med.dosw.mikrob. 2 no.1:73-84 1950. (CLML 20:5)

1. Of the Institute of Bacteriology of Lodz Medical Academy and of the National Institute of Hygiene Branch in Lodz.

PRZESMYCKI, F.; PRAZMOWSKI, W.; SEMKOW, R.

Investigations on herpes simplex virus. Med.dosw.Mikrob. 2 no.2: 300-304 1950. (CLML 20:6)

1. Summary of the report given at 10th Congress of the Polish Microbiological and Epidemiological Society held in Gdansk, Sept.1949. (Lodz)

PRZESMYCKI, F.; PRAZMOWSKI, W.; SEMKOW, R.

Investigation on herpes simplex virus. Med. dosw. mikrob., Warsz. 3 no. 3:233-241 1951. (CIML 21:3)

1. Of the National Institute of Hygiene, Warsaw.

PRZESMYCKI, F.;PRAZMOWSKI, W.;SEMKOW, R.

Antigenic properties of herpes virus. Med. dosw. mikrob., Warsz. 4 no. 3:385-386 1952. (CIML 23:3)

1. Summary of work progress presented at 11th Congress of Polish Microbiologists held in Krakow May 1951. 2. Lodz.

SEMKOW, R.

PRZESMYCKI, F.;BAKOWSKA-KENCZEWA, K.;SEMKOW, R.;TAYTSCH, Z.

Studies on poliomyelitis virus. I. Isolation of poliomyelitis virus during 1951-52. Med. dosw. mikrob. 5 no.4:391-399 1953. (CLML 25:5)

1. Of the Virusological Department (Head--Prof. F. Przesmycki M.D.) of State Institute of Hygiene, Warsaw.

SEMKOW, R.

PRZESMYCKI, F.;TAYTSCH, Z.;BAKOWSKA-KENCZEWA, K.;SEMKOW, R.

Studies on poliomyelitis virus. III. Determination of Lansing antibodies level during disease and convalescence in Heine-Medin disease. Med. dosw. mikrob. 5 no.4:411-416 1953. (CIML 25:5)

1. Of the Virusological Department (Head--Prof. F. Przesmycki, M.D.) of State Institute of Hygiene, Warsaw.

PRZESMYCKI, F.;SEMKOW, R.;TAYTSCH, Z.

Studies on poliomyelitis virus. IV. Determination of strain of poliomyelitis virus isolated in 1952. Med. dosw. mikrob. 5 no.4:417-421 1953. (CIML 25:4)

1. Of the Virusological Department (Head--Prof. F. Przesmycki, M.D.) of State Institute of Hygiene, Warsaw.

SEMKOW, R.

POL.

Isolation of the poliomyelitis virus in the epidemic of 1951-52. F. Przesmycki, K. Bakowska-Kenczewa, R. Stańczyk, R. Semkow, and S. Taytsch (*Bull. Acad. Polon. Sci.*, 1954, 2, 47—50). A description of the isolation techniques is given, together with the anatomical and histopathological changes following infection of monkeys.

B. VINEY.

SEMKOW, K.

POL.

Identification of the type of WAN strain of poliomyelitis virus isolated in 1952. F. Przesmycki, R. Semkow, and S. Taytsch (*Bull. Acad. Polon. Sci.*, 1954, 2, 51—56).—An attempt was made to determine the type of WAN strain of the poliomyelitis virus, cultivated during the 1951 epidemic. By means of immunisation of monkeys with standard strains (Brunhilda and Leon) and infection of these same monkeys with the investigated WAN strain, the latter was found to belong to Type I (Brunhilda). B. VINEY.

SEMKOW R.

POL.

Poliomyelitis (Lansing) virus antibodies in sera of diseased persons and convalescents. F. Przesmycki, R. Semkow, and S. Taytsch (*Bull. Acad. Polon. Sci.*, 1954, 2, 57–59).—No increase in the titre of antibodies was noted during the course of the disease, nor was there a definite difference in the amount of antibodies of diseased and healthy persons. A certain dependence exists between the antibodies and the age of the case; the titre was very low up to 5 years and increased after that age. The poliomyelitis epidemic in Poland was probably not caused by Lansing type virus.

B. VINEY.

SEMKOW, ROMUALD

PRZEMYSKI, Feliks; TAYTSCH, Zofia; SEMKOW, Romuald; WALENTYNOWICZ-STANCZYK, Regina

Research on the tick-borne ensephalitis; I. biology of the tick borne encephalitis viral strains isolated in Poland. Przegl. epidem., Warsz. 8 no.3:205-214 1954.

1. Z Oddzialu Wirusow Panstwowego Zakladu Higieny w Warszawie. Kierownik: prof. Dr.F.Przemyski
(ENCEPHALITIS, EPIDEMIC, virus in Poland)

SEMKOW R.

PRZEMYSKI, Feliks; TAYTSCH, Zofia; SEMKOW, Romuald; WALENTYNOWICZ-STANCZYK, Regina; KAMIENIECKA, Zofia; KIRKOWSKA, Irena

Research on the tick-encephalitis virus; II. experimental infection of monkeys with the tick-borne encephalitis virus. Przegl. epidem., Warsz. 8 no.3:215-218 1954.

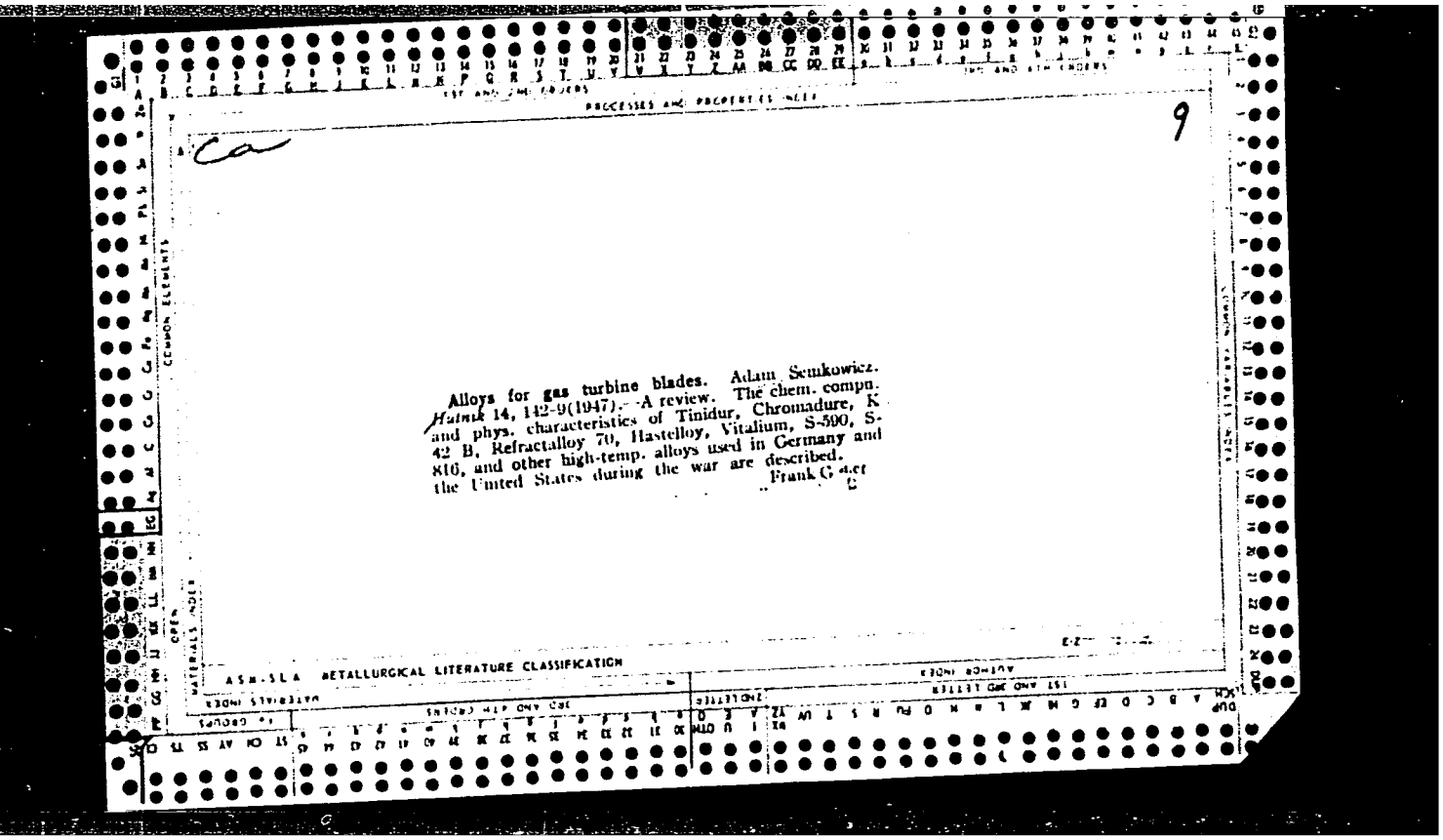
1. Z Oddzialu Wirusow Panstwowego Zakladu Higieny w Warszawie. Kierownik prof. dr. F. Przemyski.

(ENCEPHALITIS, EPIDEMIC, experimental in monkeys)

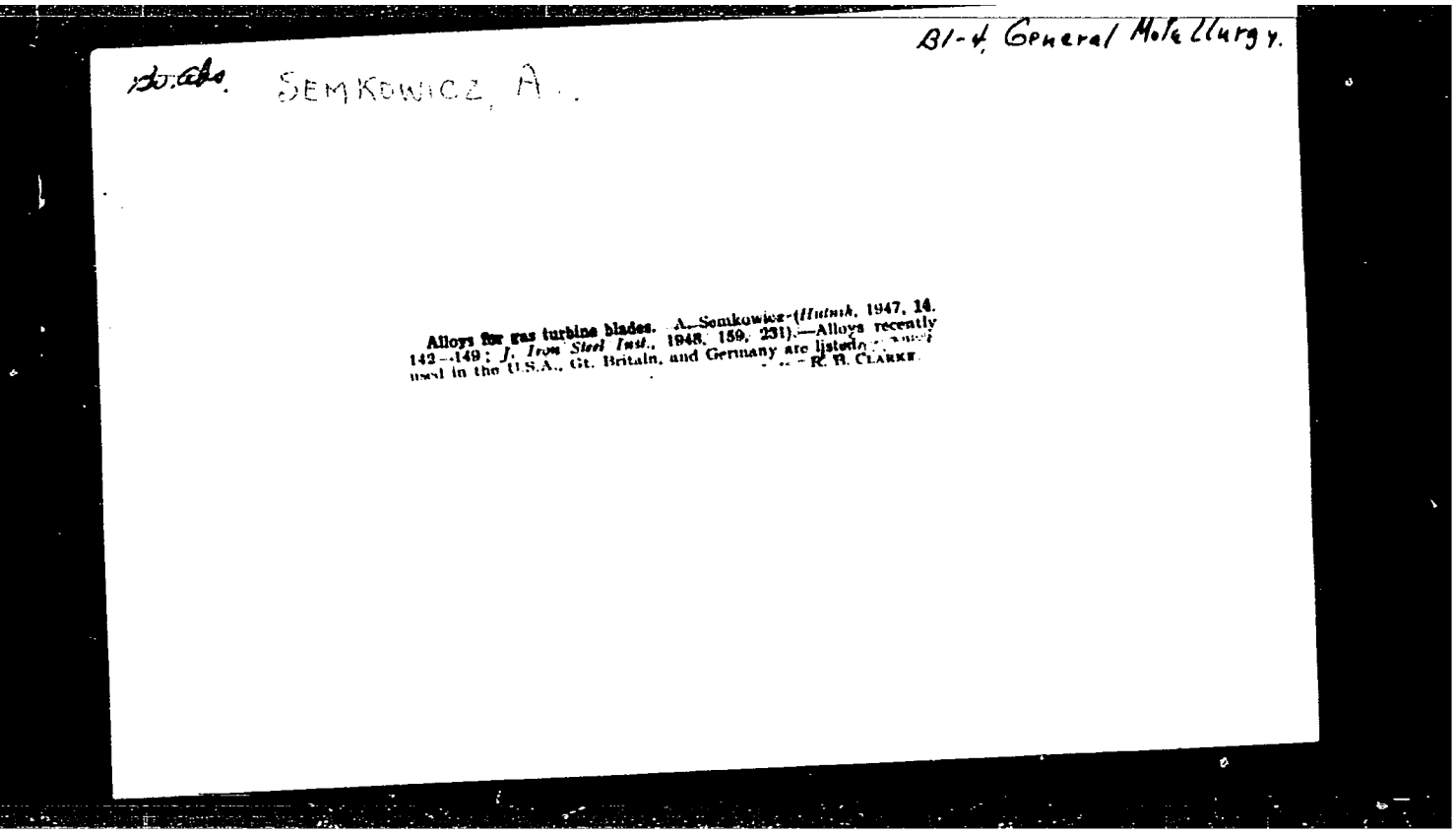
SEMKOW, Romuald; WEINRAUDER, Halina; RUSZCZEWSKI, Zygmunt

The effect of different methods of immunization with the BCG vaccine on immunity induced in experimental animals. Acta medica polona 3 no.2: 149-158 '62.

1. Department of Experimental Pathology, Polish Academy of Sciences Director: Professor Dr L. Paszkiewicz.
(BCG VACCINATION exper.)



Alloys for gas turbine blades. Adam Semkowicz. *Hutnik* 14, 142-9(1947).—A review. The chem. compn. and phys. characteristics of Tinidur, Chromadure, K 42 B, Refractalloy 70, Hastelloy, Vitalium, S-590, S-816, and other high-temp. alloys used in Germany and the United States during the war are described.
Frank G. Geer



B1-4 General Metallurgy.

SEMKOWICZ, A.

Alloys for gas turbine blades. A. Semkowicz (*Hutnik*, 1947, 14, 142—149; *J. Iron Steel Inst.*, 1948, 159, 231).—Alloys recently used in the U.S.A., Gt. Britain, and Germany are listed. [illegible] R. H. CLARKE.

SEMKOWICZ, A

4

Bukala M., Majewski J., Semkowicz A. Automatisation of Laboratory Fractional Distillation. Electronic device for control of distillation speed in laboratory columns.

„Automatyzacja procesu destylacji frakcjonowanej w laboratorium. V. Elektronowy regulator szybkości destylacji dla kolumn laboratoryjnych". Przemysł Chemiczny. No. 5, 1953, pp. 224—228, 5 figs.

An electronic device has been designed for automatic control of distillation speed in laboratory columns. The device is based on the dielectric properties of distilled liquids. An electric condenser of special design placed in the distillation head is used as indicator. The device is adapted to control the process of fractional distillation of dielectric liquids, especially terpenes. The operation of the device is independent of the speed of distillation and its accuracy is ca 5%.

Semkowicz, Adam

CZECH

✓ High-alloy steels containing nitrogen. Adam Semkowicz. *Hutnik* 22, 8–12(1955).—Addn. of N to alloy steel increases the range of austenite existence and hence can substitute Ni. The effect of N is several times more energetic than the effect of Ni. Thus, in a stainless steel contg. normally 18% Cr and 8% Ni (I) addn. of 0.2% N substitutes 4% Ni. S. found that alloy steels where Ni is substituted by N are sufficiently resistant to chem. corrosion. Steel contg. C 0.07, Cr 18.60, Ni 5.20, and N 0.13%, after being heated to 1100° and tempered by water, showed the following wt. losses when kept for 100 hrs. at 20° in 10% H_2SO_4, 45% H_3PO_4, 7% HNO_3, 20% citric acid, 15% NaOH, and 0.9% NaCl, resp.: 3.0–10.0, 0.1–1.0, 0.1, 0.1, 0.1, and 0.1 g./sq.m./hr., resp. The above steel, has a much lower resistivity to 10% H_2SO_4 and only a slightly lower resistivity to 45% H_3PO_4 than I. I can be substituted by steels of the following compns: C 0.35, 0.08, or 0.15%, resp., Mn 1.5, 16–17, or 1.5% max., resp., Si 1.2 max., 0, or 0.5%, resp., Cr 23–27, 15–16, or 25–30, resp., Ni 0.50 max., 0.5–1.0, or 0.6% max., resp., N 0.25 max., 0.13 max., or 0.20% max., resp.

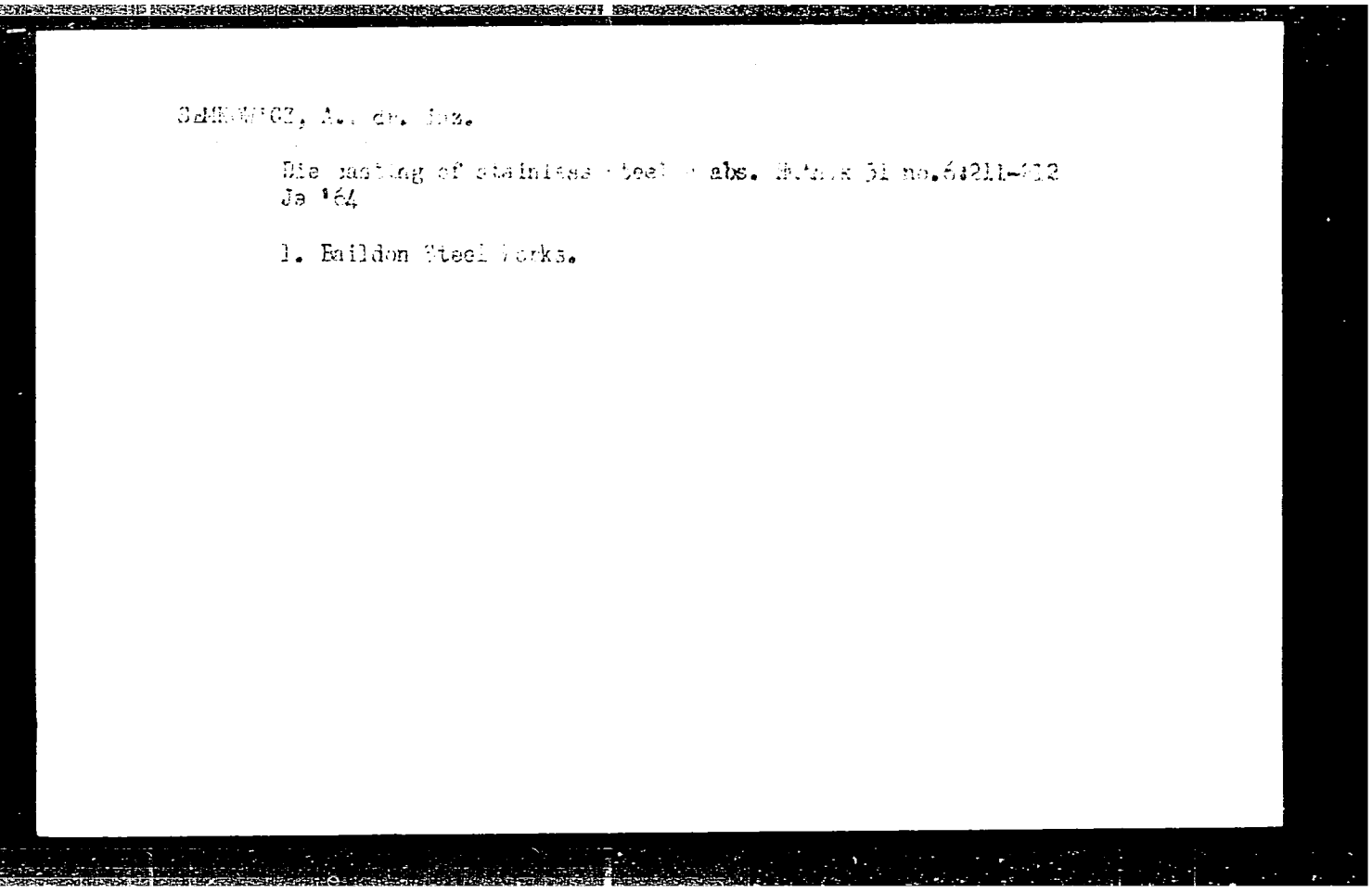
F. J. Hendel

SEMKOWIEZ, A.

5

621.316.84 : 621.385.4

3023. RESISTANCE MATERIALS FOR HEATING ELEMENTS.
A. Semkowiez.
Przegląd elektrotech., Vol. 31, No. 10-11, 561-6 (1955) In Polish.
The production of Ni–Cr and Fe–Cr–Al resistance alloys is described, and the various types are classified according to their main constituents and intended uses. Research on Polish and other resistance materials is discussed. Polish Technical Abstracts



[illegible], A., dr. inż.

Die casting of stainless steel ... abs. Hutnik 31 no.6:211-213 Je '64

1. Baildon Steel Works.

BARAN, Jozef; SEMKOWICZ, Andrzej; ZAKRZEWSKI, Jerzy

New system of the accelerated voltage stabilizer of the U-120 cyclotron. Nukleonika 7 no.11:737-740 '62.

1. Instytut Fizyki Jadrowej, Pracownia Cyklotronu, Krakow.

P/046/62/007/011/005/005
D256/D308

AUTHORS: Semkowicz, Andrzej, Sulikowski, Jerzy, Szot, Waldemar and Zakrzewski, Jerzy

TITLE: Cyclotron deflector voltage stabilizer

PERIODICAL: Nukleonika, v. 7, no. 11, 1962, 741-742

TEXT: The original control system of the deflector voltage of the 120 cm Cracow cyclotron has been found unsatisfactory: as the system relied upon a variac transformer in the power supply of the rectifier, the voltage stability was inadequate and there was no means of smooth regulation of the voltage. An additional electronic stabilizer was installed producing 0.3% stability on the deflector plate at 10% fluctuations of the power supply. The circuit consists of: 1) a Tesla MT9F regulator tube; 2) a comparator circuit in which a voltage obtained from a potential divider and proportional to the deflector voltage is compared with a reference voltage; 3) a two stage d.c amplifier. The difference between the voltage derived from the potential divider and the reference voltage is amplified

Card 1/2

[redacted], V. N.

Founding

Manufacture of castings without risers. Lit. proizv. No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

SEMYANSKIY, I. P.

SEMYANSKIY, I. P.: "The investigation of the form of the maximum discharge of the hydrographs of the spring flooding of small streams in the forest-steppe and steppe zone of the 'YeTS'." Main Administration of the Hydrometeorological Service, Council of Ministers USSR. St te Order of Labor Red Banner Hydrological Inst. Leningrad, 1956.
(Dissertation For the Degree of Candidate in Technical Sciences)

So: Knizhnaya Letopis', No. 18, 1956

SEMLYANSKAYA, L.P.

Conditions for formation of spring high water in small streams of the forest-steppe and steppe areas of the European part of the U.S.S.R. and methods for calculating its maximum discharges. Trudy GGI no.61:246-261 '57. (MIRA 10:12)
(Hydrology) (Rivers)

SEMLYANSKAYA, L.P.

Method of forecasting the flood flow in rivers of the Maritime Territory. Trudy Dal'nevost. NIGMI no.8:32-63 '59. (MIRA 13:8)

(Maritime Territory--Floods)

MARUSENKO, Yakov, Il'ich; ZEMTSOV, Aleksey Anisimovich; SEMLYANSKAYA, Lidiya Pavlovna; PANKOV, Arkadiy Mikhaylovich; MININ, Nikolay Kondrat'yevich; MORDOVINA, L.G., tekhn. red.

[Hydrography of Western Siberia] Gidrografiia Zapadnoi Sibiri. Tomsk, Izd-vo Tomskogo univ. Vol.1. [General characteristics of waters] Obshchaia kharakteristika vod. 1961. 169 p. (MIRA 14:11)

(Siberia, Western—Hydrography)

SEMLYANITSKIY, S.G., kand. tekhn. nauk, dotsent; KAZANSKIY, V.N., inzh.

Effect of the arrangement of oil currents in steam turbine tanks on the air liberation process. Izv. vys. ucheb. zav.; energ. 7 no.12:63-67 D '64. (MIRA 18:2)

1. Moskovskiy ordena Lenina energeticheskiy institut. Predstavlena kafedroy parovykh i gazovykh turbin.